TASK ORDER 47QFCA18F0058
Modification PS05

Crisis Response and Interoperable Command, Control, Communications, and Computers Electronic Systems (CRIC-ES)

in support of:

United States (U.S.) Naval Air Systems Command (NAVAIR), Naval Air Warfare Center Aircraft Division (NAWCAD), Special Communications Mission Solutions (SCMS) Division, AD-4.11.4 and Non-NAVAIR Organizations

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C.1 BACKGROUND

The Naval Air Warfare Center Aircraft Division (NAWCAD), Patuxent River, Special Communications Mission Solutions (SCMS) Division AD-4.11.4, located at Saint (St.) Inigoes, Maryland (MD), integrates and delivers products for Command, Control, Communications, Computers, Combat Systems, Intelligence, Surveillance, and Reconnaissance (C5ISR) systems. SCMS has technical authority over a number of C5ISR capabilities, including Crisis Response and Interoperable Command, Control, Communications, and Computers (C4) Electronic Systems (CRIC-ES) products comprising of Emergency Management Response Systems, Public Safety Networks, Enterprise Land Mobile Radios, and Agency Interoperable Communications. These essential CRIC-ES products support the missions of various Federal agencies including the Department of the Navy, Department of Homeland Security, and other Department of Defense (DoD) and non-DoD agencies.

C.1.1 PURPOSE

The purpose of this performance-based TO is to develop a full range of CRIC-ES solutions and products to facilitate communications and knowledge transfer at crisis locations worldwide. Rapid deployment and effective and interoperable communications among the local, state, DoD, and other Federal agencies can save lives during an emergency event. SCMS requires the contractor to support the operational requirements of the current CRIC-ES developed systems, as well as any modifications and enhancements for these systems. The contractor shall develop and maintain solutions and products for multiple client customers (United States (U.S.) Naval Air Systems Command (NAVAIR) and Non-NAVAIR), as well as provide rapid response support to CRIC-ES crisis and emergency events worldwide.

C.1.2 AGENCY MISSION

The NAWCAD Rapid Capability Engineering and Integration (RCE&I) Department, AIR-4.11, develops integrated and interoperable quality products by maintaining a close working relationship with the customer and warfighter. The NAWCAD RCE&I Department provides the personnel, facilities, and processes required to design, prototype, develop, integrate, install, modernize, and provide engineering life cycle support for airborne, shipboard, expeditionary small craft (land and sea) and shore-based systems for C5ISR systems, sensors, command/operations centers, intelligence management, and identification for the Department of the Navy, DoD, and other Government agencies. The NAWCAD RCE&I Department also provides organic integration capabilities for aircraft/airframe components, unmanned air vehicles/systems, and weapons. The NAWCAD RCE&I Department facilitates innovation by developing new approaches to integrate Commercial off-the-shelf (COTS) technology/organically developed products and by accelerating the transition of critical technology to solve challenging engineering problems. The NAWCAD RCE&I Department follows DoD processes in support of Accelerated Acquisition/Rapid response/Rapid prototyping/Lead Capabilities Integration to develop and deliver products. The NAWCAD RCE&I Department performs these efforts at all levels of classification.

SCMS Division AD-4.11.4, a division under AIR-4.11, has the mission of providing a full spectrum of C5ISR technical support to the warfighter in the Continental United States (CONUS), Outside Continental United States (OCONUS), and hazardous areas. SCMS Division

AD-4.11.4 provides this support from requirements definition through life cycle sustainment. This is “cradle to grave” support that helps ensure interoperability, supportability, and connectivity among field equipment. SCMS supports the DoD, the Executive Branch, and other Federal agencies worldwide. SCMS provides specialized solutions to best support customers’ specific needs, who are often responding to shortfalls in National Security and critical capability gaps requiring immediate development and fielding of new or improved solutions.

C.2 SCOPE

The contractor shall provide an integrated solution combining operational systems development and engineering/technical services from concept through deployment of CRIC-ES. The CRIC-ES will support emergency responses to CONUS and OCONUS events requiring interoperable communications technologies across DoD, non-DoD agencies, state, and local Government stakeholders. The contractor shall provide support to include legacy, current, and next generation CRIC-ES and the rapid design, engineering and development, Test and Evaluation (T&E), prototyping, modification, integration, verification, installation, and operations support of those systems, subsystems, and components. The contractor shall also purchase materials and equipment to support these efforts.

CRIC-ES include, but are not limited to:

a. Emergency Management Response Systems
b. Public Safety Networks
c. Public Safety Command and Control Systems
d. Operations Centers
e. Dispatch Centers
f. Land Mobile Radio Systems
g. Interoperable Communications Solutions

The contractor shall perform services at the SCMS Government site, contractor site, as well as customer locations worldwide on a project-by-project basis. The Government anticipates Long-Distance Travel to the following OCONUS locations: Japan, Korea, Germany, Italy, Kuwait, Qatar, Bahrain, Afghanistan, Guam, Hawaii, Cuba, Romania, Poland, Ukraine, Spain, Greece, and Singapore.

Task Order Section H.21 provides contractor site integration facility requirements.

The contractor shall follow the Government-provided SCMS Systems Engineering Management Plan (SEMP) (**Section J, Attachment DD**) with augmentations to suit particular SCMS customers. The Government requires simultaneous project support that can consist of any combination of the following tasks:

Task 1 - Task Order Program Management

Task 2 - Transition-In

Task 3 - Transition-Out

Task 4 - CRIC-ES Engineering Services

Task 5 - CRIC-ES Integration and Fabrication Services

Task 6 - CRIC-ES Logistics and Sustainment Services

C.3 CURRENT ENVIRONMENT

C.3.1 OPERATING ENVIRONMENT

SCMS is a project-driven, matrixed organization with a mix of Government and contractor employees that support a large and diverse customer base. Projects range from one-time engineering studies to long-term cradle-to-grave acquisition and life cycle support projects involving large multi-discipline teams. SCMS is comprised of over 100 Government employees who are primarily engineers, Information Technology (IT) professionals, technicians, and logisticians organized into six branches. Approximately 1,000 additional staff from various contractors provide technical, engineering, management, and production support to SCMS.

CRIC-ES work is accomplished through separately identifiable project assignments under the scope and tasks of the CRIC-ES TO. The duration of each project is typically between two months and 12 months. Each project has its own contractor-developed, Government-approved Project Plan (PP), which further refines the scope, schedule, cost, labor mix, material, constraints, objectives, clearance levels, Temporary Duty (TDY) and work locations, and ancillary issues surrounding the particular CRIC-ES effort. Task Order **Section J, Attachment AA** contains a **SCMS Project Management Process Map**.

For each project, SCMS will designate a Government Project Lead (GPL) who will lead the Integrated Project Team (IPT) and be ultimately responsible for the project management and systems engineering aspects of the project from inception to completion. The contractor shall provide all expertise and services as stated in the TO to deliver the CRIC-ES and products as defined by the Government-approved Customer PP.

The contractor shall support multiple simultaneous projects in varying stages of development, as well as support projects in sustainment and modification. There will be many instances when pre-installed CRIC-ES must be modified, operated, or refreshed for a new crisis or emergency situation. In these cases, the contractor shall mobilize expert staff immediately to the crisis location without causing delays or a resultant slow-down with other ongoing CRIC-ES projects. This will be a performance-based TO. The clearance level of the work locations in performance of CRIC-ES may vary in classification ranging from Unclassified (UNCLASS) to Top Secret.

The contractor shall follow the Government-provided SCMS SEMP (**Section J, Attachment DD**) with augmentations to suit particular SCMS customers and projects. This will enable the contractor to implement a comprehensive technical and management process that includes translating operational requirements into configured systems, integrating the technical inputs of the entire design team, managing interfaces, characterizing and managing technical risk, transitioning technology from the technology base into project specific efforts, verifying that designs meet operational needs, and integrating designs into CRIC-ES.

CRIC-ES solutions employ mixtures of legacy, industry standard, and newly emerging technologies in its missions to provide full-spectrum crisis interoperable communications. The systems will include fixed, transportable, mobile, handheld, man packable CRIC-ES or the fixed or semi-fixed terminations of such systems. In particular, capability enhancement via technologically derived design solutions will be important aspects of delivered systems. COTS and Government off-the-shelf (GOTS) equipment incorporation will be essential in providing the latest capabilities to the SCMS CRIC-ES mission. Although not all-inclusive, CRIC-ES will encompass the following communications and interoperability technologies and systems:

a. Military Satellite Communications – to include Ultra High Frequency (UHF), Extremely High Frequency (EHF), Global Positioning System (GPS), Global Broadcast System (GBS), and X-Band Super High Frequency (SHF) Systems.
b. Commercial Satellite Communications – to include International Maritime Satellite (INMARSAT), Iridium, Ku-Band, C-Band, Ka-Band, Low Earth Orbit (LEO), and Very Small Aperture Terminal (VSAT) Systems.
c. High Frequency (HF) Radio Communications/Technologies – to include Automatic Link Establishment (ALE), Near Vertical Incidence Skywave (NVIS), and Internet Protocol (IP) over HF.
d. Short Haul Tactical Communications – to include UHF/Very High Frequency (VHF) Line of Sight (LOS), HAVEQUICK, Single Channel Ground and Airborne Radio System (SINCGARS), and Microwave LOS.
e. Commercial Wireless Communications – to include cellular, Land Mobile Radio (LMR), paging, Personal Communications Service (PCS), and wireless Local Area Network (LAN).
f. Leading Edge Wireless Technologies – to include Software Defined Radios (SDR), Antijam (AJ)/Low Probability of Interception (LPI)/Low Probability of Detection (LPD) technology systems, broadband enabling techniques (compression, Time Division Multiple Access (TDMA), Code Division Multiple Access (CDMA), etc.), Joint Tactical Radio System (JTRS), Digital Mobile Radio (DMR), Slice Radios, or Ultra-Wide Band (UWB) Technologies.
g. Digital Networking Technologies – to include Personal Area Network (PAN), LAN, Wide Area Network (WAN), and Metropolitan Area Network (MANs) of various topologies and being connected via copper, fiber optics, or wireless connections. Networking protocols, Asynchronous Transfer Mode (ATM), Frame Relay, Integrated Services Digital Network (ISDN), Digital Subscriber Line (DSL), Synchronous Optical Networking (SONET), Transmission Control Protocol (TCP)/IP, Multiple Protocol Label Switching (MPLS), Voice over Internet Protocol (VoIP), Quality of Service, and latency are all important areas of interest with these technologies.
h. Encryption and IT Security Technologies – to include integration and installation of current Government Type 1 approved cryptographic devices and commercial Suite B and Commercial Solutions for Classified (CSFC) encryption into telecommunication systems and the design and configuration of multi-level/multi-domain security systems.
i. Infrastructure and Access Control – to include cable plant design and installation, video surveillance, perimeter radar and other technical monitoring sensors and systems, and personnel and vehicle gate and door control system configuration.
j. Video Teleconferencing Systems (VTC) – to include fixed, mobile, and portable.

C.3.2 APPLICABLE DOCUMENTS

Requirements for SCMS products to have interoperability among military, civilian, U.S., and foreign users may dictate an adherence to a variety of specifications and standards. DoD systems adhere to Joint Technical Architecture (JTA) Standards (Current Version). Non-DoD systems may be governed by numerous commercial, national, or international standards. The standards listed in **Section J, Attachment EE**, Applicable Documents, are not all-inclusive and presented

only as representative sources of the technological interface details that may be required for systems integration under this TO.

C.4 OBJECTIVE

Quality, rapid response and sustainability are the overall objectives of the CRIC-ES TO. CRIC-ES downtime is not an option during a crisis or emergency event. The CRIC-ES capability provided to the warfighter and other emergency responders is crucial to life saving and other operational activities. SCMS's high-level objectives under this TO are as follows:

a. Produce high quality CRIC-ES that can perform as required in hazardous emergency environments throughout each phase of the project's life cycle.
b. Provide rapid response capability with global reach to concurrently surge, support, and manage multiple crisis events in various CONUS and OCONUS locations, without sacrificing performance on other projects in various stages of development and sustainment.
c. Provide highly sustainable CRIC-ES that can be operated and serviced with minimal cost and effort from the customer activity. Availability of the CRIC-ES is essential, as the timing of crisis events is usually not known far in advance.

C.5 TASKS

C.5.1 TASK 1 – TASK ORDER PROGRAM MANAGEMENT

The contractor shall provide program management support of this TO. This includes the management and oversight of all activities performed by contractor personnel, including subcontractors, to satisfy the requirements identified in the Task Order. The contractor shall identify a Program Manager (PM) by name that shall provide management, direction, administration, quality assurance, and leadership of the execution of this TO.

The development of CRIC-ES solutions, products, and systems is customer-based and performed in separately managed projects. The contractor shall provide periodic project support consisting of a broad range of solutions and engineering activities, as well as provide emergency support when local, state, or national crises occur. Project activities span the requirements contained in all tasks under Section C.5. Project duration is typically between two and 12 months.

In advance of each project, the Government will meet with the contractor to discuss each project in terms of understanding the start date, milestones, unique requirements, expected travel, monitoring, reporting, and performance expectations. The contractor shall report resources expended against each project with each Monthly Status Report (MSR) and in the invoice detail backup information.

The contractor shall provide support for identification of procurement vehicles, purchasing of software, equipment, and material, to include market research, recommendations, maintaining a list of required items, monitoring and tracking, and maintaining accurate inventory records using the Government's tracking system. The contractor shall procure allowable items via the TO or provide technical inputs into NAWCAD 4.11.4 procurement documents for items to be purchased via alternative NAWCAD 4.11.4 contracting vehicles for the requirements of this TO.

C.5.1.1 SUBTASK 1 – ACCOUNTING FOR CONTRACTOR MANPOWER REPORTING

The contractor shall report ALL contractor labor hours (including subcontractor labor hours) required for performance of services provided under this contract for SCMS via a secure data collection site. The contractor is required to completely fill in all required data fields using the following web address: http://www.ecmra.mil/.

Reporting inputs shall be for the labor executed during the period of performance during each Government Fiscal Year (FY), which runs October 1 through September 30. While inputs may be reported any time during the FY, all data shall be reported no later than October 31 of each calendar year. Contractors may direct questions to the help desk at: http://www.ecmra.mil/.

The contractor may use Extensible Markup Language (XML) data transfer to the database server or fill in the fields on the website. The XML direct transfer is a format for transferring files from a contractor's systems to the secure web site without the need for separate data entries for each required data element at the website. The specific formats for the XML direct transfer may be downloaded from the web.

C.5.1.2 SUBTASK 2 – COORDINATE A TO KICK-OFF MEETING

The contractor shall schedule, coordinate, and host a **TO Kick-Off Meeting** at the location approved by the Government (**Section F, Deliverable 02**). The meeting will provide an introduction between the contractor personnel and Government personnel who will be involved with the TO. The meeting will provide the opportunity to discuss technical, management, and security issues, and travel authorization and reporting procedures. At a minimum, the attendees shall include Key contractor Personnel, representatives from SCMS, other relevant Government personnel, and the FEDSIM Contracting Officer's Representative (COR).

At least three days prior to the TO Kick-Off Meeting, the contractor shall provide a **TO Kick-Off Meeting Agenda** (**Section F, Deliverable 01**) for review and approval by the FEDSIM COR and the SCMS Technical Point of Contact (TPOC) prior to finalizing. The agenda shall include, at a minimum, the following topics/deliverables:

a. Points of contact (POCs) for all parties.
b. **Draft Program Management Plan (PMP)** (**Section F, Deliverable 03**) and discussion including schedule, tasks, etc.
c. Personnel discussion (i.e., roles and responsibilities and lines of communication between contractor and Government).
d. Staffing Plan and status.
e. **Final Transition-In Plan** (**Section F, Deliverable 04**) and discussion.
f. Security discussion and requirements (i.e., building access, badges, Common Access Cards (CACs)).
g. Contractor facility status update.
h. Invoicing considerations, to include a spreadsheet containing Customer Project cost breakdown.
i. Transition discussion (to include in-flight projects, upcoming projects).
j. **Draft Baseline Quality Control Plan (QCP)** (**Section F, Deliverable 05**).

k. Process to ingest project requirements.

The Government will provide the contractor with the number of Government participants for the TO Kick-Off Meeting and the contractor shall provide sufficient copies of the presentation for all present.

The contractor shall draft and provide TO **Kick-Off Meeting Minutes (Section F, Deliverable 06)** documenting the TO Kick-Off Meeting discussion and capturing any action items.

C.5.1.3 SUBTASK 3 – PARTICIPATE IN A MONTHLY STATUS MEETING AND PREPARE A MONTHLY STATUS REPORT (MSR)

The contractor shall participate in a **Monthly Status Meeting (Section F, Deliverable 07)** to discuss the activities of the overall TO, to include those listed below, and document those activities in a **MSR** (**Section F, Deliverable 08**), initially utilizing the MSR Template in **Section J, Attachment E**. The MSR shall include the following:

a. Activities during reporting period, by task (include on-going activities, new activities, and activities completed, and progress to date on all above-mentioned activities). Each section shall start with a brief description of the task.
b. Problems and corrective actions taken. Also, include issues or concerns and proposed resolutions to address them.
c. Personnel gains, losses, and status (security clearance, etc.).
d. Government actions required.
e. Schedule (show major tasks, milestones, and deliverables; planned and actual start and completion dates for each).
f. Summary of trips taken, conferences attended, etc. (attach Trip Reports as requested to the MSR for the reporting period).
g. Accumulated invoiced cost for each CLIN up to the previous month.
h. Projected cost of each CLIN for the current month.
i. Individual Customer PP performance, schedule, and detailed cost reporting to include labor, Materials and Equipment, ODC, and Long-Distance Travel costs.
j. A Workforce Reporting Attachment (**Section J, Attachment Y**) via encrypted electronic mail (email) to the designated SCMS TPOC. The Workforce Reporting Attachment shall include a labor mix report consisting of name, labor categories, total hours charged for the month, and location. The contractor shall also include the number of gains and losses.

The contractor shall track and report performance and accomplishments (subjective and objective measures) in accordance with the performance criteria contained in the current AFDP and as designated by the SCMS TPOC and FEDSIM COR.

C.5.1.4 SUBTASK 4 – CONVENE AD HOC TECHNICAL STATUS MEETINGS

The contractor shall convene **Technical Status Meetings** (**Section F, Deliverable 09**) for SCMS Customer Projects on an ad hoc basis. Attendees will be all project-relevant Key and non-Key Personnel, the SCMS TPOC, and the FEDSIM COR. The purpose of the ad hoc meetings is to review project status for the SCMS Customer Project against the PP, in particular, regarding schedule, resource usage, performance metrics, and technical issues and potential risks. The

contractor shall provide **Technical Status Meeting Minutes** (**Section F, Deliverable 10**) including attendance, issues discussed, decisions made, and action items assigned, to the SCMS TPOC and FEDSIM COR within five workdays following the meeting.

C.5.1.5 SUBTASK 5 – PREPARE A PROGRAM MANAGEMENT PLAN (PMP)

The contractor shall document all support requirements in a PMP. The contractor shall provide the Government with a **Draft PMP** (**Section F, Deliverable 03**) on which the Government will make comments. The **Final PMP** (**Section F, Deliverable 11**) shall incorporate the Government's comments.

The PMP shall:

a. Describe the proposed management approach.
b. Contain detailed Standard Operating Procedures (SOPs) for all tasks (as requested by the Government).
c. Include milestones, tasks, and subtasks required in this TO.
d. Provide for an overall Work Breakdown Structure (WBS) with a minimum of three levels and associated responsibilities and partnerships between Government organizations.
e. Describe in detail the contractor's approach to risk management under this TO.
f. Describe in detail the contractor's approach to communications, including processes, procedures, communication approach, and other rules of engagement between the contractor and the Government.
g. Include the contractor's Baseline QCP (Section C.5.1.9).
h. Document and provide SCMS customer feedback participation (Section C.5.1.12).

C.5.1.6 SUBTASK 6 – UPDATE THE PMP

The PMP is an evolutionary document that shall be updated annually at a minimum. The contractor shall work from the latest Government-approved version of the PMP.

C.5.1.7 SUBTASK 7 – PREPARE TRIP REPORTS

The Government will identify the need for a **Trip Report** (**Section F, Deliverable 12**) when the FEDSIM **Travel Authorization Request** (**Section J, Attachment F**) is submitted. The contractor shall keep a summary of all long-distance travel including, but not limited to, the name of the contractor personnel, location of travel, duration of trip, and POC at travel location. Trip Reports shall also contain Government approval authority, total cost of the trip, a detailed description of the purpose of the trip, and any knowledge gained. At a minimum, Trip Reports shall follow the format provided in **Section J, Attachment G.**

C.5.1.8 SUBTASK 8 – PROVIDE FINANCIAL REPORTING

The contractor shall provide **Financial Reports** (**Section F, Deliverable 13**) in accordance with **Section J, Attachments V and W**.

C.5.1.9 SUBTASK 9 – BASELINE QUALITY CONTROL PLAN (QCP)

The contractor shall provide a **Baseline QCP** (**Section F, Deliverable 14**). The contractor shall periodically update the QCP as changes in program processes are identified.

Within the QCP, the contractor shall identify its approach for providing quality control in meeting the requirements of the TO. The contractor's QCP shall describe its quality control methodology for accomplishing TO performance expectations, objectives, and requirements. The contractor shall fully discuss its validated processes and procedures that provide high quality performance for each Task Area. The QCP shall describe how the processes integrate with the Government's requirements.

C.5.1.10 SUBTASK 10 – CONDUCT CUSTOMER PROJECT KICK-OFF MEETINGS

The contractor shall schedule, coordinate, and host a **Customer Project Kick-Off Meeting** (**Section F, Deliverable 15**) for each SCMS customer project at the location approved by the Government. At the Government's discretion, the Customer Project Kick-Off Meeting may be held virtually. The meeting shall provide an introduction between the contractor personnel and Government personnel who will be involved with the project. The meeting will provide the opportunity to discuss technical, management, and security issues, as well as travel authorization and reporting procedures required for the project. At a minimum, the attendees shall include contractor Key Personnel, the GPL, representatives from SCMS, other relevant Government personnel, the SCMS TPOC, and the FEDSIM COR.

Prior to the Customer Project Kick-Off Meeting, the contractor shall provide a **Customer Project Kick-Off Meeting Agenda** (**Section F, Deliverable 16**) for review and approval by the SCMS GPL prior to finalizing. The agenda shall include, subject to guidance from the GPL, the following topics/deliverables:

a. POCs for all parties
b. **Draft Customer PP** in accordance with **Section C.5.1.11** (**Section F, Deliverable 17**) and discussion

The Government will provide the contractor with the number of Government participants for the Customer Project Kick-Off Meeting and the contractor shall provide sufficient copies of the presentation for all present.

The contractor shall draft and provide **Customer Project Kick-Off Meeting Minutes** (**Section F, Deliverable 18**) documenting the Customer Project Kick-Off Meeting discussion and capturing any action items.

C.5.1.11 SUBTASK 11 – PREPARE CUSTOMER PROJECT PLANS (PP)

The contractor shall prepare Customer PPs in close coordination with the SCMS GPL. The contractor shall tailor the requirements for each Customer PP to match the complexity of the SCMS customer project requirements. The contractor shall provide the Government with a Draft Customer PP at the Customer Project Kick-off Meeting. The **Final Customer PP** (**Section F, Deliverable 19**) shall incorporate the Government's comments.

The Customer PP is an evolutionary document that shall be updated as elements of the project change. The contractor shall work from the latest Government-approved version of the Customer PP.

The Customer PP requirements include:

a. Project scope

b. Project cost estimate (Rough Order of Magnitude (ROM))
c. Master Equipment List (MEL)/Bill of Materials (if applicable)
d. Project schedule including milestones, tasks, and subtasks required in this project
e. Project risks and mitigations
f. Project staff and resources
g. Performance criteria
h. Travel considerations
i. Project work products deliverables
j. Security considerations
k. Provide for an overall WBS with the appropriate amount of detail and associated responsibilities and partnerships between Government organizations
l. Project transition
m. SCMS customer feedback participation (Section C.5.1.12)

C.5.1.12 SUBTASK 12 – SUPPORT SCMS CUSTOMER FEEDBACK PROCESS

The contractor shall support the SCMS customer feedback process by providing the SCMS GPL with the **SCMS CRIC-ES Qualifying Event Identification (ID) Form** as required (**Section F, Deliverable 20).** See **Section J, Attachment X** for the **SCMS Customer Feedback Process**.

The SCMS customer feedback process is part of SCMS' performance management initiative to track customer satisfaction to ensure SCMS is delivering quality products that meet or exceed customer expectations. The SCMS **CRIC-ES Qualifying Event ID Form** (**Section J, Attachment BB**) shall be prepared for each qualifying event that occurs on an individual project, and shall be identified as part of the Customer PP. Multiple CRIS-ES Qualifying Event ID Forms could be required based on the length and complexity of the individual project.

C.5.2 TASK 2 - TRANSITION-IN

The contractor shall update the Draft Transition-In Plan provided with its technical proposal and provide a **Final Transition-In Plan** (**Section F, Deliverable 04**). The contractor shall ensure that there will be minimum service disruption to vital Government business and no performance degradation during and after transition. The contractor shall have its TO transition-in activities fully implemented No Later Than (NLT) 30 calendar days after TOA, and all transition activities shall be completed in accordance with the timelines established in the Government-approved Final Transition-In Plan.

C.5.3 TASK 3 -TRANSITION-OUT

The contractor shall provide TO transition-out services to facilitate the accomplishment of a seamless transition from the contractor to an incoming contractor/Government personnel at the expiration of the CRIC-ES TO. The contractor shall provide a **Draft Transition-Out Plan** within six months of Project Start (PS) (**Section F, Deliverable 21**). At a minimum, the contractor shall review and update the Transition-Out Plan on an annual basis. Additionally, the contractor shall review and update the Transition-Out Plan quarterly during the final Option Period (**Section F, Deliverable 22**).

In the Transition-Out Plan, the contractor shall identify how it will coordinate with the incoming contractor and/or Government personnel to transfer knowledge regarding the following:

a. Project management processes
b. POCs
c. Location of technical and project management documentation
d. Status of ongoing technical initiatives
e. Appropriate contractor to contractor coordination to ensure a seamless transition
f. Transition of Key Personnel
g. Schedules and milestones
h. Actions required of the Government

The contractor shall also establish and maintain effective communication with the incoming contractor/Government personnel for the period of the transition via weekly status meetings or as often as necessary to ensure a seamless transition-out.

The contractor shall implement its Transition-Out Plan NLT 90 calendar days prior to expiration of the TO.

C.5.4 TASK 4 – CRIC-ES ENGINEERING SERVICES

The contractor shall provide a broad range of engineering services to support the SCMS CRIC-ES mission. This engineering support shall consist of the upfront design work that will produce actionable solutions and design plans that can be utilized by the integration and fabrication teams to produce the end products and systems delivered to SCMS customers. The contractor shall first ingest and understand customer requirements and translate them into high-level designs and architectures, using system engineering best practices. When necessary, prototyping may be involved as a “proof of concept” to flush out the feasibility of certain design features. Upon Government approval, the contractor shall produce the detailed design packages, test plans, specifications, and step-by-step work instructions that will be used to procure, integrate, build, test and sustain CRIC products and systems.

The contractor shall use systems engineering methodologies to determine creative solutions to unique communication interoperability scenarios. The contractor shall follow SCMS System Engineering process as described in the SEMP (**Section J, Attachment DD)**. The contractor shall adapt these methods to the CRIC systems engineering requirements. The Government will analyze anticipated system performance based on subsystem and component procurement, replacement, modification, or enhancement activities. In addition, the contractor shall support the development, review, refinement or critiquing of system documents such as Concept of Operations (CONOPS), Capability Development Documents (CDD), Initial Capabilities Documents (ICD), and Capability Production Documents (CPD) as well as specifications and program and project plans. The contractor shall define points of design inadequacy and risks within the specified documentation and document results. The contractor shall also participate in meetings, design reviews, and conference presentations to provide systems engineering and associated expertise. The CRIC-ES engineering services to be executed under a Customer PP may include, but are not limited to, the subtasks listed below.

C.5.4.1 SUBTASK 1 - REQUIREMENTS DEFINITION REFINEMENT AND CRIC-ES SOLUTION DEVELOPMENT

The contractor shall provide requirements definition services for new solution development and/or for enhanced and augmented efforts. The contractor shall translate requirements into high-level designs, initial architectures, and proof of concept prototyping efforts. In this phase of the project life cycle, the contractor shall analyze the customer mission needs statements and operational requirements documents and derive a high-level system, system-of-systems, or family of systems designs meeting those requirements. The contractor shall reduce potential incompatibilities, define potential risk areas, identify alternatives, and recommend design modifications to meet interoperability requirements. The GPL will use the work products and deliverables in the phase to obtain the necessary approvals to proceed with the detailed design and analysis phase of the project. The CRIC-ES requirements definition and CRIC-ES solution development services to be executed under a Customer PP shall include some, or all, of the following tasks:

a. **Requirements Definition Refinement**

1. The contractor shall collect, refine, and document the results of all requirements gathering and analysis performed as part of a project, as well as document requirements traceability throughout the project life cycle into a **System Requirements and Requirements Traceability Matrix (RTM) (Section F, Deliverable 23)** document.
2. The contractor shall investigate new technologies for applications to existing and proposed CRIC-ES projects as well as perform industry surveys at SCMS Division-designated locations to determine the availability of COTS components that meet CRIC-ES design goals. The contractor shall perform industry surveys, which involves contacting commercial suppliers, identifying components, and performing trade-off studies to provide recommendations to SCMS Division technical personnel for either current CRIC-ES projects or potential usage.
3. The contractor shall document the results of these investigations in a **Technology Report (Section F, Deliverable 24)**. The Technology Report shall contain new technologies, an evaluation of results, and potential design solutions, improvements, and alternatives, and it shall detail all associated trade-offs and provide fully justified recommended approaches.
4. The contractor shall perform technical risk analysis and identifications and document these risks in a **Technical Risk Management Plan (Section F, Deliverable 25)** in support of CRIC-ES projects, as required. The contractor shall incorporate these risks into a **Risk Register (Section F, Deliverable 26)** that will be periodically reviewed, updated, and briefed by project GPLs in order to mitigate risks, exploit opportunities, and correct issues. These risk assessments will frequently be incorporated into overarching customer briefs provided to SCMS customers.

b. **High Level Design and Solution Architecture**

1. The contractor shall support the design and analysis of systems and ensure their capability to meet technical, functional, Information Assurance (IA) and mission requirements. The contractor shall evaluate the system’s capability to meet design goals and standards in an operational environment, with consideration given to

reliability, maintainability, interoperability, and life cycle cost effectiveness. The contractor shall identify risk and low-performance areas in a **System Capability Analysis Document (Section F, Deliverable 27)**.

2. The contractor shall perform specified concept and preliminary designs of vehicular, transportable, mobile, and fixed systems based on SCMS-furnished criteria. The representative types of systems include shelters mounted on military High Mobility Multipurpose Wheeled Vehicle (HMMWV); modified COTS vehicles, such as vans procured through other equipment manufacturers and sent to specialty shops for enhancement or modification; and electronic equipment installed in transit cases interconnecting at the user location to form complete systems of differing capabilities.
3. The contractor shall synthesize the outputs from the Requirement Definition phase above; requirements from the System Requirements and Requirements Traceability Matrix, the results of any new technology studies, and risks from the Technical Risk Management Plan to derive initial high-level designs and/or architectures.
4. These initial design deliverables shall convey how the proposed high-level system, system-of-systems, or family of systems design meets or exceeds the customer mission needs and operational requirements. The design shall reduce potential incompatibilities, define potential risk areas, identify alternatives and costs, and recommend design modifications to meet interoperability requirements.

c. Prototyping Design

1. The contractor shall design Prototypes/Mock-Ups for systems as required by the GPL. Prototypes may be simple, functional "proofs of concept" for specific systems and subsystems and could be either physical or simulated. Prototypes may also be complete representations of the final system to be built.
2. The contractor shall provide **Design and Development Technical Documentation (Section F, Deliverable 28)** describing the design and development of prototypical/ modified equipment, systems, and shelters/enclosures/platforms including design, development, and installation plans describing the development processes, fabrication techniques, installation procedures, and operational instructions of the equipment, systems, and shelters/enclosures/platforms.

d. Information Assurance (IA)

IA is a distinct aspect of cybersecurity pursuant to the Government's granting of an Authority to Test (ATT) or Authority to Operate (ATO). The contractor shall:

1. Support defining the certification and accreditation requirements, preparing required artifacts, submitting accreditation packages into the Defense Information Systems Agency (DISA) Enterprise Mission Assurance Support Service (eMASS) system, and implementing and validating IA controls.
2. Support performing corrective actions and coordination with the Designated Approving Authority (DAA) or Authorizing Official (AO).
3. Develop Risk Management Framework (RMF) or Defense Information Assurance Certification and Accreditation Process (DIACAP) packages for receiving ATT or ATO letters from the appropriate DAA.
4. Work with SCMS customers to identify any unique cybersecurity requirements and ensure activities and artifacts are aligned with those requirements.

C.5.4.2 SUBTASK 2 – DESIGN AND ANALYSIS

The contractor shall provide CRIC-ES design and analysis services relative to applications of CRIC-ES, subsystems, and components. This engineering support refines the high-level designs and solutions from **Section C.5.4.1** and produces deliverables that are used in the Integration and Fabrication under **Section C.5.5** to produce a complete CRIC-ES solution. The CRIC-ES design and analysis services under a Customer PP shall include, but are not limited to, any or all of the following tasks:

a. The contractor shall study methods by which system, subsystem, and component design improvements can be effected. The contractor shall identify strengths and weaknesses associated with various design alternatives and recommend design modifications to the SCMS Division technical personnel. The contractor may be required to perform computer simulations, network and circuit design, Radio Frequency (RF) propagation, and antenna coverage modeling in support of this subtask. The contractor shall document analysis and results of these findings in a **Technical Analysis Report (Section F, Deliverable 29)**.

b. The contractor shall perform tradeoffs and system requirement allocations to maximize CRIC-ES performance. The analyses shall include link power budget calculations, radio propagation/coverage assessments, cost tradeoffs, performance assessments, IA considerations, and reliability and supportability of the components. The analyses shall focus on total system analysis, subsystem, component, and subcomponent elements. The contractor shall document the analysis in a **Technical Analysis Report**.

c. The contractor shall perform analysis of COTS Communications Electronics (C-E) equipment, to ensure that the C-E meet electrical, electronic, and mechanical requirements associated with operation in the intended environment. This shall be documented in a **Technical Analysis Report**.

d. The contractor shall prepare a systems engineering functional allocation breakdown among hardware, software, and firmware components, consistent with an integrated system design. The contractor shall document the system design to include an MEL and a **Plan of Action and Milestones (POA&M) (Section F, Deliverable 30)**.

e. The contractor shall prepare technical documentation describing design and analysis conducted to include technical reports, system specifications, block diagrams, schematics, hardware configurations, interfaces, parts lists, wiring diagrams, functional descriptions, and supporting technical data. The contractor shall document design and analysis in an appropriate format as specified by the GPL as Technical Documentation.

f. The contractor shall participate in design review meetings, technical reviews, and conference presentations to provide CRIC-ES solutions and associated C-E design expertise. The contractor shall provide technical briefings for each CRIC-ES customer project, one or more times, and will require short-term travel to the customer site. The contractor shall provide notes from the meetings as specified by GPLs in a **Technical Analysis Report**.

g. The contractor shall prepare inputs to technical specifications for the procurement, fabrication or assembly of all items including shelters, communication equipment, antennas, generators, environmental control units, and trailers required for the complete CRIC-ES. In addition, the contractor shall prepare specifications or inputs to

specifications including MELs identifying all equipment needed for the CRIC-ES as well as provide inputs specifications for a particular installation.

h. The contractor shall prepare drawings detailing the CRIC-ES for the specific installation. Drawings shall range from guidance sketches to detailed electrical and mechanical assembly drawings depending on the purpose of the system design effort. Drawings shall include, but are not limited to, single line block diagrams, system cable block diagrams, system wire run sheets, communications space arrangements and elevation drawings (including identification of the center of gravity/moment), antenna system arrangement, radiation pattern drawings, antenna drawings, transportable modular system drawings, or modular system integration drawings.

i. The contractor shall perform specified detailed designs of vehicular, transportable, mobile, and fixed systems based on SCMS furnished criteria. Representative of the types of systems include shelter mounted HMMWV; modified COTS vehicles, such as vans procured through other equipment manufacturers and sent to specialty shops for enhancement or modification; and electronic equipment installed in transit cases interconnecting at the user location to form complete systems of differing capabilities.

j. The contractor shall also adapt CRIC-ES designs to ensure successful operation of the CRIC-ES in foreign countries where different laws, treaties, or international rules may govern in peacetime. The contractor shall interface with Government personnel in designated countries to ascertain the appropriate adaptations for successful CRIC-ES operation to include:

    1. Define design concepts.
    2. Conduct technical feasibility study/concept design.
    3. Conduct supportability analysis.
    4. Define required resources.
    5. Create inputs to MELs and schedule.

k. The contractor shall prepare a concise history listing the principal issues and decisions related to the development of the design.

C.5.4.3 SUBTASK 3 – TESTING AND VERIFICATION

The contractor shall test and verify CRIC-ES based on the SCMS SEMP (**Section J, Attachment DD)** seven stages of testing to minimize the complexities of testing an integrated system. This shall include the preparation of T&E plans and procedures for some, or all required stages based on the scope and complexity of the particular CRIC-ES. The contractor, as appropriate, shall perform laboratory and field tests that include the design and fabrication of test fixtures. The contractor shall perform the final acceptance testing with the GPL and then present the finished CRIC-ES to the SCMS client. The CRIC-ES testing and validation services to be executed under a PP shall include, but are not limited to, any or all of the following tasks:

a. The contractor shall observe demonstrations by potential solutions providers in industry or within the Government and perform initial tests and evaluations to determine appropriateness of newly identified components/systems for application to proposed systems. The contractor shall document the results of these evaluations in a **Test and Evaluation (T&E) Report (Section F, Attachment 31)**.

b. The contractor shall develop and deliver a **Test and Evaluation Master Plan (TEMP) (Section F, Deliverable 32)** or provide technical comments to a formal TEMP as required by the Customer PP and GPL.

c. The contractor shall prepare **System Integration and Test Plans (Section F, Deliverable 33)**. The System Integration and Test Plans shall document all requirements for integration and test facilities, support systems, instrumentation, and logistic support. The contractor shall prepare test outlines, including test indexes, test narratives, and test sequence diagrams for installation and acceptance testing, as well as prepare inputs to the TEMP.

d. The contractor shall prepare **Total System Test Plans (Section F, Deliverable 34)** that shall establish the basic requirements for relationships among first article tests, factory acceptance tests, system integration tests, installation and acceptance tests, technical evaluation, and operational T&E.

e. The contractor shall provide **Draft Pre-Delivery Test Procedures (Section F, Deliverable 35)** to the SCMS Division for review and comment prior to finalizing procedures and conducting testing. The contractor shall provide completed Final Pre-Delivery Test Procedures and a **Test Report (Section F, Deliverable 36)** prior to submission of acceptance test procedures.

f. The contractor shall develop pre-delivery test procedures and conduct pre-delivery tests to verify proper operation and performance of all CRIC-ES including hardware, firmware, software, and procedures. Test procedures shall include forms to record the results of testing.

g. The contractor shall validate the integration of CRIC-ES with existing equipment. The contractor shall also identify components, equipment, subsystems, and systems not having Joint Interoperability Test Center (JITC) certifications for interoperability or have limited or partial JITC certification for test completion and support obtaining these certifications.

h. The contractor shall prepare **Test and Evaluation Plans and Procedures (Section F, Deliverable 37)**. The contractor shall ensure reliability, maintainability, and testing of electronic systems, logistic support plans, and documentation; witness specified tests and demonstrations; and analyze test data.

i. The contractor shall conduct laboratory and field tests at NAWCAD St. Inigoes, MD and other SCMS Division designated Government facilities. The contractor shall prepare Installation Plans; design and fabricate test fixtures; install, maintain, and test the system; prepare test reports; remove the system from the test site; and prepare the system for stowage or shipment to another site. SCMS Division maintains the right to test any deliverable to ensure it meets the required specifications.

j. The contractor shall perform test procedures in contractor facilities to ensure the proper performance of each item developed prior to delivery to the SCMS Division. The objective of the procedures shall be to demonstrate that the product functions as intended, and to demonstrate that each requirement has been achieved.

C.5.4.4 SUBTASK 4 – MULTIMEDIA AND ENGINEERING COMPUTER AIDED DRAFTING (CAD)

The contractor shall provide multimedia and CAD support as required and specified in the Customer PP (Section C.5.1.11). The contractor shall provide the following CAD services:

a. Multimedia development, interface, and operational support. Efforts include film production/editing, graphics, media (analog or digital) management/duplication/storage, internet services, general audio-visual production, 3-D concept visualization, digital photography, and training.
b. Support to any engineering, integration and production, or sustainment and logistic task within the TO as stated in the Government-approved Customer PP.

C.5.5 TASK 5 – CRIC-ES INTEGRATION AND FABRICATION SERVICES

Based on approved designs and relevant stage testing results, the contractor shall integrate all parts as a CRIC-ES unit and integrate with its ultimate installed system/platform. This system/platform, as determined by the Customer PP, may be within vehicular, transportable, mobile, and fixed facility locations located at the St. Inigoes, MD Government or contractor provided facility, or at the SCMS client locations (CONUS and OCONUS). This integration may require modifications to vehicles or facilities in order to accommodate the CRIC-ES unit. The design and performance of these modifications is the responsibility of the contractor. The contractor may also be required to retrofit trucks or facilities once the CRIC-ES is no longer required. The CRIC-ES will be acceptance tested within its vehicular, transportable, mobile, or fixed facility platform as a fully operational unit by the Government. The CRIC-ES integration and fabrication services to be executed under a Customer PP shall include, but are not limited to, any or all of the following tasks:

a. The contractor shall integrate, install, produce, checkout, and test the CRIC-ES. This includes integrating completely tested and validated CRIC-ES into completely tested and validated fixed, transportable, mobile, handheld, man packable, specialized platforms, and the fixed or semi-fixed shore terminations of such systems. Fabrication support includes the installation of cables, equipment racks and cabinets, equipment and supporting fixtures, and foundations.
b. The contractor shall fabricate and assemble required cables, assemblies, peripherals, and interfaces. This effort shall include, but is not limited to soldering, wrapping, harnessing, and connecting electronics wiring, connectors, and components.
c. The contractor shall custom fabricate cabinetry, racks, and furniture for mobile shelters and vehicles, as required.
d. The contractor shall develop and integrate prototype CRIC-ES to verify design. The contractor shall perform limited fabrication including the electrical and mechanical connections for the production of breadboards, mock-ups, and prototype systems. The prototypes and mockups shall be used to perform system integration and testing prior to installation of the equipment within the required platform. Based on prototype designs, the contractor shall perform prototype development, production, and manufacture of electronic systems, subsystems, cables, components, peripheral devices, and equipment. Production and fabrication shall apply to limited quantity design prototype or developmental systems.

e. The contractor shall provide CRIC-ES ancillary support technical services to design and upgrade facilities used to primarily house the CRIC-ES. These facilities may include classified facilities up to Top Secret. The contractor shall support SCMS Division's interface with architect and engineering contractors, construction contractors, Naval Facilities Engineering Command (NAVFAC), and Public Works representatives.

1. The contractor shall conduct or review facility requirements analyses. The contractor shall evaluate the facility and its supporting structures' capability to meet the CRIC-ES operational requirements, and it shall conduct surveys at potential installation sites to document architectural designs and conceptual alternatives, design options, and operational assessments.
2. The contractor shall conduct or review facility site surveys. The contractor shall identify facility layout, space considerations, cable plant layout, and structural considerations and identify and review available power, physical, environmental, and security constraints. The contractor shall document this in an **Implementation Plan (Section F, Deliverable 38)** including a POA&M for facility modernization and upgrade and prepare supporting project documentation detailing modifications made to the facility.
3. The contractor shall support the design, integration, and testing of the physical and electrical security of CRIC-ES and associated facilities.
4. The contractor shall support the full functioning and operation and maintenance of an optimal operating environment for CRIC-ES within the environment/housing through fabricating custom shelters, cabinetry, racks, furniture systems, installation, repair, and service of environmental control systems. The contractor shall identify an on-site POC for supporting the facility design, upgrade, and operations and maintenance, when requested.

C.5.6 TASK 6 – CRIC-ES LOGISTICS AND SUSTAINMENT SERVICES

The contractor shall perform a full range of logistics and sustainment services in support of CRIC-ES, to include procurement, configuration management, training, and Engineering Change Proposal (ECP) tracking and handling. The contractor shall support routine sustainment actions across versions of a CRIC-ES system/subsystems as well as a rapid response situation requiring expedited assembly of expert teams and travel to SCMS client locations (CONUS and OCONUS). Multiple routine sustainment projects as well as simultaneous disasters shall require this sustainment and modification support. The CRIC-ES logistic and sustainment services shall be executed under a Customer PP and shall include, but are not limited to, some or all of the following tasks:

a. The contractor shall provide system-level logistics planning to include sustainability, operational effectiveness, suitability requirements, and full life cycle functions required to optimize system performance and to minimize costs. The contractor shall:

1. Assist in the development or review of strategies utilizing SCMS Division-furnished criteria and provide support of system requirements considering geographic area of deployment, equipment requirements, supportability, interoperability, availability, procurement lead times, and inventory and stocking requirements. The contractor shall assist in the development and maintenance of a provisioning parts list for spare and repair parts.

2. Provide integrated logistics planning and analysis for new, existing, and refurbished/modified systems.
3. Support the development, review, analysis, or updates to service maintenance concepts and plans and reliability plans and reports.
4. Conduct performance-based supportability analysis on new, modified, and related C-E systems covering elements of reliability, maintainability, and availability as they apply to the following: maintenance planning, supply support, support equipment, trend analysis, technical data, manpower and personnel, computer resources, training and training support, packing, handling, shipping, transportations, facilities, and design influence.
5. Receive, verify, and ship equipment and materials for development and life cycle support requirements and comply with relevant policies for equipment custody.
6. Maintain Configuration Management Plans that shall include policies and procedures for the identification and control of hardware, software, and documentation.
7. Conduct systems operation and maintenance manual Verification and Validation (VER/VAL). The contractor shall conduct Functional Configuration Audits (FCAs) and Physical Configuration Audits (PCAs) on SCMS Division-developed systems to verify configuration items and computer software configuration items.
8. Identify and document physical characteristics of designated systems, monitor and advise on the configuration change schedule, and synchronize with physical configuration changes.
9. Maintain Configuration Management (CM) baseline of products, hardware, software, drawings, and documentation; and, track all Engineering Change Proposals (ECPs) in the Government-provided configuration management system.
10. Facilitate Configuration Control Boards (CCBs), System Change Requests (SCRs), and Engineering Review Boards (ERBs).
11. Support the development of ECPs to include changes based on user knowledge, lessons learned, fleet feedback, field experience, and technology refreshment.

b. The contractor shall conduct performance-based supportability analysis.
c. The contractor shall receive, verify, and ship equipment.
d. The contractor shall maintain accurate inventory records in the Government-owned inventory system.
e. The contractor shall create and update technical/training manuals.
f. The contractor shall create and update **Technical Data Packages (TDP) (Section F, Deliverable 39)**.
g. The contractor shall collect Reliability, Availability, and Maintainability (RAM) data through the SCMS Maintenance Action Reporting System (MARS).
h. The contractor shall monitor and replace Diminishing Manufacturer Sources and Material Shortages (DMSMS). For projects where the contractor is manufacturing a product at the board or component level, the contractor shall maintain awareness of potentially obsolescent components and inform SCMS so mitigating measures may be taken.
i. The contractor shall provide packaging, handling, storage, and transportation support for material and equipment that is to be shipped by commercial or Government

transportation services. This involves being aware of the services requirements and crating or packaging materials appropriately.

j. The contractor shall undo modifications or alterations on CRIC-ES vehicles or transport facilities to an acceptable condition for disposition or return if leased/rented.

k. The contractor shall establish the life cycle sustainment framework and process for hardware/software maintenance, spares management, disposal, and Wide Area Interoperability System (WAIS) hub maintenance. This service may also be requested for future projects. The contractor shall provide hardware tracking support to gather data for equipment and hardware requirements. The contractor shall not accept any products on behalf of the Government. The contractor shall coordinate with, and assist the Government with performing the following:

   1. Market research per Federal Acquisition Regulation (FAR) Part 10 to identify potential sources capable of satisfying the Government's technical requirement, analyze results, and recommend sources capable of satisfying operational and performance parameters. The contractor shall review the Federal Stock System for availability of required items and make recommendations to the SCMS Division concerning use and integration of National Stock Number (NSN) and non-NSN hardware materials. The contractor shall provide technical inputs to support material procurement documents.
   2. Identify quantity and schedule requirements, including spare parts, and support planning for the procurement of long lead items. Maintain a Current List of Required Hardware Items to be procured, and perform technical support in the preparation of procurement documentation and development of and assistance with Life Cycle Sustainment Plans (LCSPs) for CRIC-ES.
   3. Maintain accurate Inventory Records for equipment purchased and received for storage prior to integration. The contractor shall securely warehouse project equipment and materials as required and establish and maintain a system for tracking, inventorying, and managing parts and equipment required for integration, test, upgrade, and repair of systems, which could be housed at the contractor facility or at Government storage facilities based on individual project requirements.
   4. Input, recall, forward, and print data from the NAWCAD corporate procurement initiation systems. Using the Government's automated system, track acquisition status from procurement initiation to hardware delivery. The contractor shall compare expected hardware availability with system development, production, and operational schedules. The contractor shall utilize the Government's automated system to maintain project material tracking reports and to identify delinquent material deliveries. The contractor shall notify SCMS Division of discrepancies between schedules and hardware delivery. The contractor shall input requisition receipt data in the Government's automated system upon receipt of commercial procurements.

l. The contractor shall provide remote and local troubleshooting and repair of fielded SCMS customer's CRIC-ES. The contractor shall:

   1. Provide support to act on customer trouble calls (triggered via website, email, and/or duty phone calls) and engage Government and/or contractor-provided Subject Matter Expert (SMEs) to initiate actions to resolve issues via remote and/or local troubleshooting, hardware/software support, and repair.

2. Document trouble calls actions and status in Government-provided trouble reporting system.
3. Perform corrective action maintenance, installation, configuration and maintenance, and routine preventative maintenance and troubleshoot problems.
4. Perform technical assistance visits and system repairs (to include the coordination of any additional vendor-specific resources) for fielded systems at customer sites.
5. Establish system procedures for analysis of failures to determine the root cause, and documentation for recording corrective actions taken
6. Perform trend analysis of actions completed on fielded systems and recommend corrective actions and/or process changes to improve system maintenance statistics (e.g., downtime, Mean Time Between Failures (MTBF), Mean Time to Recover (MTTR), etc.).

m. The contractor shall provide the following CRIC-ES on-site and customer location (field) support:
   1. Expedite repair of fielded CRIC-ES by collecting failed customer equipment at SCMS field activities and managing its transportation to Government maintenance/repair facilities or back to the manufacturer as appropriate.
   2. Exercises, events, crisis operations, and provide unique support to real-world events with the following:
      i. Subject expertise support to assist system operators in circumstances where the customer has insufficient trained personnel. This generally occurs once or twice a year and usually when new or unfamiliar equipment has been installed. These events usually last one week.
      ii. On-site tech assist. These are typically one-week trips anywhere a CRIC-ES developed system is delivered. Systems requiring technical assistance are typically deployed CONUS; however, occasionally, systems are deployed OCONUS.
      iii. Operator training regarding system operation, capabilities, functions, limitations, and interfaces. This is roughly half classroom training at St. Inigoes, MD, and half customer-site training.

n. The contractor shall provide Production and Delivery of CRIC-ES support:
   1. Provide and deliver a completed CRIC-ES system or subsystem.

o. The contractor shall provide the following Training support:
   1. Create **Training Materials (Section F, Deliverable 40)** including instructor guides, trainee guides, and classroom presentation materials for each CRIC-ES at designated locations. The contractor shall submit training material to SCMS Division for approval prior to conducting any formal training.
   2. Provide operational training (formal classroom and on-the-job) to the end user for CRIC-ES. The training will usually occur at the customer site, but can occur at St. Inigoes, MD, or the contractor site. The contractor shall be responsible for all plans, materials, and curricula. The training shall be provided to operators, maintainers, other instructors, and various functional personnel.

p. The contractor shall provide the following Procurement support:

1. Advise and identify the selection of equipment and materials necessary for the development of CRIC-ES.
2. Provide the following support ensuring rapid and flexible execution of projects:
    i. Identify multiple procurement sources for equipment, material, and software under the project specific MEL.
    ii. Interface with and update the Government's hardware and software acquisition management systems to upload/download data on each item procured under the MEL, print reports/forms, and receive and transfer digital files with Government systems in conjunction with the required CRIC-ES tasks.
    iii. Provide support to SCMS for the purchasing and management of software, equipment, and material to include market research, recommendations, maintaining a list of required items, monitoring and tracking, maintaining accurate inventory records using the Government's tracking system, and purchasing.
    iv. Track and manage warranties and software licenses.